

## WEST Search History

DATE: Wednesday, October 13, 2004

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		<i>DB=PGPB,USPT; PLUR=YES; OP=ADJ</i>	
<input type="checkbox"/>	L9	L8 and p31	2
<input type="checkbox"/>	L8	L7 and ethylene	122
<input type="checkbox"/>	L7	L6 and (promoter or terminator) [clm]	274
<input type="checkbox"/>	L6	regulatory element and banana and fruit	364
<input type="checkbox"/>	L5	L4 and fruit [clm]	41
<input type="checkbox"/>	L4	L3 and banana [clm]	92
<input type="checkbox"/>	L3	L2 and promoter [clm]	521
<input type="checkbox"/>	L2	L1 and fruit	886
<input type="checkbox"/>	L1	banana and promoter	1198

END OF SEARCH HISTORY

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Patent Office Classifications  
NEWS 6 AUG 02 The Analysis Edition of STN Express with Discover!  
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NEWS 12 SEP 14 STN Patent Forum to be held October 13, 2004, in Iselin, NJ  
NEWS 13 SEP 27 STANDARDS will no longer be available on STN  
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MACINTOSH VERSION IS V6.0c(ENG) AND V6.0Jc(JP),  
AND CURRENT DISCOVER FILE IS DATED 11 AUGUST 2004  
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FILE 'HOME' ENTERED AT 17:35:49 ON 13 OCT 2004

=> file agricola caplus biosis

COST IN U.S. DOLLARS

SINCE FILE	TOTAL
ENTRY	SESSION
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=> s banana and (promoter or terminator or terminator)

L1 144 BANANA AND (PROMOTER OR TERMINATOR OR TERMINATER)

=> s l1 and fruit

L2 42 L1 AND FRUIT

=> dup rem l2

PROCESSING COMPLETED FOR L2

L3 42 DUP REM L2 (0 DUPLICATES REMOVED)

=> d 1-10 ti

L3 ANSWER 1 OF 42 CAPLUS COPYRIGHT 2004 ACS on STN

TI MaExp1, an ethylene-induced expansin from ripening **banana fruit**

L3 ANSWER 2 OF 42 BIOSIS COPYRIGHT (c) 2004 The Thomson Corporation. on STN

TI Prototype demonstration of transgenic resistance to the nematode *Radopholus similis* conferred on **banana** by a cystatin.

L3 ANSWER 3 OF 42 CAPLUS COPYRIGHT 2004 ACS on STN

TI DNA regulatory elements associated with **fruit** development

L3 ANSWER 4 OF 42 CAPLUS COPYRIGHT 2004 ACS on STN

TI Sequences of **banana** and melon promoters for expression of transgenes in plants

L3 ANSWER 5 OF 42 BIOSIS COPYRIGHT (c) 2004 The Thomson Corporation. on STN

TI Tolerance of mycorrhized **banana** (*Musa* sp. cv. Pacovan) plantlets to saline stress.

L3 ANSWER 6 OF 42 CAPLUS COPYRIGHT 2004 ACS on STN

TI Genetic vector comprising pea gene PPF1 protein for regulating plant growth and for producing anti aging food

L3 ANSWER 7 OF 42 CAPLUS COPYRIGHT 2004 ACS on STN

TI Expression of recombinant human papillomavirus capsid proteins in plants and uses as an oral vaccine

L3 ANSWER 8 OF 42 CAPLUS COPYRIGHT 2004 ACS on STN

TI Usage of zinc finger protein to regulate gene expression and metabolic pathways in plants and creation of five zinc finger proteins

L3 ANSWER 9 OF 42 CAPLUS COPYRIGHT 2004 ACS on STN

TI **Banana fruit** specific **promoter** isolated from **banana** 1-aminocyclopropane-1-carboxylic acid synthase gene

L3 ANSWER 10 OF 42 CAPLUS COPYRIGHT 2004 ACS on STN

TI Method of producing human insulin by utilizing transgenic tomato

=> d 4 so

L3 ANSWER 4 OF 42 CAPLUS COPYRIGHT 2004 ACS on STN  
SO U.S. Pat. Appl. Publ., 50 pp., Division of U.S. Ser. No. 527,972.  
CODEN: USXXCO

=> d 9 so

L3 ANSWER 9 OF 42 CAPLUS COPYRIGHT 2004 ACS on STN  
SO Faming Zhuanli Shenqing Gongkai Shuomingshu, 26 pp.  
CODEN: CNXXEV

=> d 9 so

L3 ANSWER 9 OF 42 CAPLUS COPYRIGHT 2004 ACS on STN  
SO Faming Zhuanli Shenqing Gongkai Shuomingshu, 26 pp.  
CODEN: CNXXEV

=> d 10 ab

L3 ANSWER 10 OF 42 CAPLUS COPYRIGHT 2004 ACS on STN  
AB The method comprises synthesizing human insulin gene, cloning into EcoRI and BamHI sites of vector pGEM-11Z to obtain plasmid pGEM11Z-Ins; digesting plasmid pTM or pB1221 with HindIII and XbaI to obtain **fruit-specific promoter** p2a12 or CaMV 35S **promoter**, cloning into plasmid pGEM11Z-Ins, cloning into dibasic expression vector to obtain plant expression vector pCAM2a12-ins; transforming into tomato (or other vegetable or **fruit**), parentally generating to F1; and deactivating seed of F2 by site-specific recombinant system. The synthetic human insulin consists of A chain, B chain, and 6-AA linker, and 13/63 bp in A chain and 18/90 bp in B chain are replaced. The site-specific recombinant system is selected from Cre-lox, FLP-FRT, R- RS, and/or Gin-gix. The transcription of insulin gene in seed of F2 is inhibited by deletion insulin gene or by using hormone regulating gene (such as iaam gene or ipi gene) or RNase gene.

=> d 11-20 ti

L3 ANSWER 11 OF 42 CAPLUS COPYRIGHT 2004 ACS on STN  
TI Method for knocking out exogenous genes from specific tissues or organs of transgenic plants by utilizing location recombination system

L3 ANSWER 12 OF 42 BIOSIS COPYRIGHT (c) 2004 The Thomson Corporation. on STN

TI The **banana** actin 1 **promoter** drives near-constitutive transgene expression in vegetative tissues of **banana** (Musa spp.).

L3 ANSWER 13 OF 42 CAPLUS COPYRIGHT 2004 ACS on STN  
TI Cloning of **promoter** of **banana fruit** ripening-related gene ACO1 and primary study on its function

L3 ANSWER 14 OF 42 CAPLUS COPYRIGHT 2004 ACS on STN  
TI Cloning of **promoter** of **banana fruit**-specific ACC synthase gene and its function

L3 ANSWER 15 OF 42 CAPLUS COPYRIGHT 2004 ACS on STN  
TI Method for producing transgenic plants resistant to glyphosate herbicides

L3 ANSWER 16 OF 42 CAPLUS COPYRIGHT 2004 ACS on STN  
TI Method for producing transgenic plants resistant to glyphosate herbicides

L3 ANSWER 17 OF 42 CAPLUS COPYRIGHT 2004 ACS on STN  
TI Method for producing transgenic plants resistant to glyphosate herbicides

L3 ANSWER 18 OF 42 CAPLUS COPYRIGHT 2004 ACS on STN  
TI **Banana** and melon promoters for expression of transgenes in plants

L3 ANSWER 19 OF 42 CAPLUS COPYRIGHT 2004 ACS on STN  
TI Expression of immunogenic hepatitis B surface antigens in transgenic plants

L3 ANSWER 20 OF 42 CAPLUS COPYRIGHT 2004 ACS on STN  
TI Orally immunogenic bacterial enterotoxins expressed in transgenic plants

=> d 13 so

L3 ANSWER 13 OF 42 CAPLUS COPYRIGHT 2004 ACS on STN  
SO Shengwu Gongcheng Xuebao (2001), 17(4), 428-431  
CODEN: SGXUED; ISSN: 1000-3061

=> d 14 so

L3 ANSWER 14 OF 42 CAPLUS COPYRIGHT 2004 ACS on STN  
SO Shengwu Gongcheng Xuebao (2001), 17(3), 293-296  
CODEN: SGXUED; ISSN: 1000-3061

=> d 18 so

L3 ANSWER 18 OF 42 CAPLUS COPYRIGHT 2004 ACS on STN  
SO PCT Int. Appl., 72 pp.  
CODEN: PIXXD2

=> d 18 pi

L3	ANSWER 18 OF 42	CAPLUS	COPYRIGHT 2004 ACS on STN		
	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
	-----	----	-----	-----	-----
PI	WO 2000056863	A1	20000928	WO 2000-US7293	20000317
	W: AU, CA, JP				
	RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
	EP 1165755	A1	20020102	EP 2000-918138	20000317
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI				
	JP 2002539779	T2	20021126	JP 2000-606722	20000317

=> d 21-30 ti

L3 ANSWER 21 OF 42 BIOSIS COPYRIGHT (c) 2004 The Thomson Corporation. on STN  
TI Promoters derived from **banana** bunchy top virus DNA-1 to -5 direct vascular-associated expression in transgenic **banana** (Musa spp.).

L3 ANSWER 22 OF 42 CAPLUS COPYRIGHT 2004 ACS on STN  
TI Herbicide binding proteins and transgenic plants containing them

L3 ANSWER 23 OF 42 CAPLUS COPYRIGHT 2004 ACS on STN

TI cDNAs of **banana fruit** development and the gene products and developmentally-regulated **promoter** regions

L3 ANSWER 24 OF 42 CAPLUS COPYRIGHT 2004 ACS on STN  
 TI cDNA sequence of **banana** 1-aminocyclopropanecarboxylate synthase and aminocyclopropanecarboxylate oxidase, and vectors containing cDNAs used for genetic transformation of plants

L3 ANSWER 25 OF 42 CAPLUS COPYRIGHT 2004 ACS on STN  
 TI Genetic control of **fruit** ripening

L3 ANSWER 26 OF 42 CAPLUS COPYRIGHT 2004 ACS on STN  
 TI Transgenic plant or plants with a naturally high water content overproducing at least two amino acids of the aspartate family

L3 ANSWER 27 OF 42 CAPLUS COPYRIGHT 2004 ACS on STN  
 TI Genetic control of **fruit** ripening and senescence in **banana**

L3 ANSWER 28 OF 42 CAPLUS COPYRIGHT 2004 ACS on STN  
 TI The **promoter** of the 1-aminocyclopropane-1-carboxylic acid oxidase gene of **banana** and its uses

L3 ANSWER 29 OF 42 CAPLUS COPYRIGHT 2004 ACS on STN  
 TI Coordinated inhibition of plant gene expression

L3 ANSWER 30 OF 42 CAPLUS COPYRIGHT 2004 ACS on STN  
 TI Transgenic plants with increased solids content

=> d 23 pi

L3	ANSWER 23 OF 42	CAPLUS	COPYRIGHT 2004	ACS on STN
	PATENT NO.	KIND	DATE	APPLICATION NO.
	-----	----	-----	-----
PI	WO 9915668	A2	19990401	WO 1998-US3343
	WO 9915668	A3	19991007	19980923
	W:	AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM		
	RW:	GH, GM, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG		
	CA 2304109	AA	19990401	CA 1998-2304109
	AU 9894712	A1	19990412	AU 1998-94712
	EP 1017820	A2	20000712	EP 1998-948058
	R:	AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI		
	JP 2001517446	T2	20011009	JP 2000-512960
				19980923

=> d 25 ab

L3 ANSWER 25 OF 42 CAPLUS COPYRIGHT 2004 ACS on STN  
 AB A method of modulating the ripening and/or senescence characteristics in plants of the genus *Musa* comprises transforming plants with one or more sequences obtainable from the deposited cDNA library having the accession number 40183, regenerating said plants and selecting from the population of transformants those plants having modulated and/or tissue senescence characteristics.

=> d 26 ab

L3 ANSWER 26 OF 42 CAPLUS COPYRIGHT 2004 ACS on STN

AB A chimeric double gene construct comprising a nucleic acid sequence encoding an enzyme having aspartate kinase (AK) activity and a nucleic acid sequence encoding an enzyme having dihydrodipicolinate synthase (DHPS) activity is provided. This construct is capable of differential expression of the two genes resulting in an increased level of both lysine and threonine more than 5-fold the wild type level of each amino acid in a plant or parts thereof (no data). Expression constructs pAAP50 and pAAP60 for potato and sugar beet were prepared. These plasmids contained a first chimeric gene comprising the enhanced cauliflower mosaic virus 35S **promoter**, the  $\Omega$  sequence from the coat protein of tobacco mosaic virus, the pea rbcS-3A transit peptide sequence, the lysC gene of Escherichia coli and the termination signal of the octopine synthase gene of Agrobacterium tumefaciens and a second chimeric gene comprising the patatin **promoter**,  $\Omega$  sequence, rbcS-3A transit sequence, dapA gene of E. coli and octopine synthase termination signal.

=> d 28 ab

L3 ANSWER 28 OF 42 CAPLUS COPYRIGHT 2004 ACS on STN

AB The **promoter** of the 1-aminocyclopropane-1-carboxylic acid oxidase (ACC oxidase) gene of **banana** is characterized and sequenced for use in driving expression of foreign genes in transgenic plants. The gene was cloned by screening a **banana** genomic library in LambdaFixII with an apple ACC oxidase cDNA. The gene is strongly expressed during **fruit** ripening, but was absent from green **fruit** pulp and peel.

=> d 28 so

L3 ANSWER 28 OF 42 CAPLUS COPYRIGHT 2004 ACS on STN

SO PCT Int. Appl., 17 pp.  
CODEN: PIXXD2

=> d 28 pi

L3 ANSWER 28 OF 42 CAPLUS COPYRIGHT 2004 ACS on STN

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9738106	A1	19971016	WO 1997-GB654	19970311
W:	AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, HU, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, TJ, TM, TR, TT, UA, UG, US, UZ, VN, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM			
RW:	GH, KE, LS, MW, SD, SZ, UG, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG			
AU 9719324	A1	19971029	AU 1997-19324	19970311

=> d 29 ab

L3 ANSWER 29 OF 42 CAPLUS COPYRIGHT 2004 ACS on STN

AB A process for the inhibition of two or more target genes comprises introducing into the plant a single control gene which has distinct DNA regions homologous to each of the target genes and a **promoter** operative in plants adapted to transcribe from such distinct regions RNA that inhibits expression of each of the target genes. Constructs suitable

for use in the process, as well as cells and plants containing such constructs are disclosed. Transgenic tomato plants expressing, from the cauliflower mosaic virus 35 S **promoter**, a gene for RNA complementary to both the pectinesterase and polygalacturonase genes were prepared. Both genes producing sense RNA and those producing antisense RNA reduced pectinesterase and polygalacturonase activities in the transgenic plants. This trait was inheritable.

=> d 30 ab

L3 ANSWER 30 OF 42 CAPLUS COPYRIGHT 2004 ACS on STN

AB A method for preparation of transgenic plants that bear fruits having increased solid contents by inhibiting the expression of the pTOM36 gene is described. Expression of the pTOM36 gene is inhibited by the antisense RNA of the gene. Three plasmids for generating the antisense RNA of the pTOM36 gene under the control of a constitutive/inducible **promoter**, e.g. the CaMV 35S **promoter**, were prepared. Homozygous fruits of tomato plants transformed with plasmid pJR136B encoding the antisense RNA of bases 1-538 of the pTOM36 gene exhibited significantly increased solid contents.

=> d 31-40 ti

L3 ANSWER 31 OF 42 CAPLUS COPYRIGHT 2004 ACS on STN

TI Cloning of pectinesterase cDNA of tomato for altering ripening properties of fruits

L3 ANSWER 32 OF 42 CAPLUS COPYRIGHT 2004 ACS on STN

TI Plant glyceraldehyde-3-phosphate dehydrogenase genes under control of heterologous promoters for use in controlling **fruit** ripening in transgenic plants

L3 ANSWER 33 OF 42 CAPLUS COPYRIGHT 2004 ACS on STN

TI DNA constructs containing pTOM75 DNA and transgenic plants containing these constructs

L3 ANSWER 34 OF 42 CAPLUS COPYRIGHT 2004 ACS on STN

TI Control of **fruit** ripening and senescence in plants by expression of aminocyclopropanecarboxylic acid-metabolizing enzyme gene

L3 ANSWER 35 OF 42 CAPLUS COPYRIGHT 2004 ACS on STN

TI DNA constructs for regulation of **fruit** ripening, and transgenic plants containing them

L3 ANSWER 36 OF 42 CAPLUS COPYRIGHT 2004 ACS on STN

TI **Fruit**-ripening genes from tomato and their use in controlling ripening

L3 ANSWER 37 OF 42 CAPLUS COPYRIGHT 2004 ACS on STN

TI Effects of sense and antisense transcripts of lycopene biosynthesis gene on **fruit** and flower color

L3 ANSWER 38 OF 42 CAPLUS COPYRIGHT 2004 ACS on STN

TI Method for inhibiting specific gene product production in plants

L3 ANSWER 39 OF 42 CAPLUS COPYRIGHT 2004 ACS on STN

TI Transgenic plants producing antisense RNA

L3 ANSWER 40 OF 42 CAPLUS COPYRIGHT 2004 ACS on STN

TI The effect of growth inhibitors and **promoter** on the growth, flowering and **fruit** size of **banana** plants



=> d 32 ab

L3 ANSWER 32 OF 42 CAPLUS COPYRIGHT 2004 ACS on STN

AB A constitutive, inducible, or developmentally regulated **promoter** is fused to part or all of a plant glyceraldehyde-3-phosphate dehydrogenase (GAPDH) gene such that the gene, when expressed in transgenic plants, produces sense or antisense RNA. By controlling the expression of this gene, the level of respiration in **fruit** during ripening is also controlled. Plasmids containing a fragment of the coding region of tomato GAPDH linked to the 35S or polygalacturonase gene **promoter** in the sense or antisense direction were prepared

=> d 32 ab

L3 ANSWER 32 OF 42 CAPLUS COPYRIGHT 2004 ACS on STN

AB A constitutive, inducible, or developmentally regulated **promoter** is fused to part or all of a plant glyceraldehyde-3-phosphate dehydrogenase (GAPDH) gene such that the gene, when expressed in transgenic plants, produces sense or antisense RNA. By controlling the expression of this gene, the level of respiration in **fruit** during ripening is also controlled. Plasmids containing a fragment of the coding region of tomato GAPDH linked to the 35S or polygalacturonase gene **promoter** in the sense or antisense direction were prepared

=> d 37 ab

L3 ANSWER 37 OF 42 CAPLUS COPYRIGHT 2004 ACS on STN

AB A **fruit** ripening-specific gene of tomato that is involved in the biosynthesis of lycopene is used to modulate color development in **fruit** and flowers. Antisense transcripts expression vectors were prepared using the cauliflower mosaic virus 35S **promoter**, or the tomato polygalacturonase gene **promoter** and fragments of the gene from the plasmid pTOM5. These were then introduced into tomato plants by Agrobacterium-mediated transformation. In 37 transformants prepared using the polygalacturonase **promoter**-driven expression unit the **fruit** remained yellow even when overripe. Lycopene was present at <2% of the normal levels. In plants carrying one copy of the gene per cell the inheritance was simple Mendelian. Expression of the gene in the sense orientation resulted in **fruit** of a deeper red color.

=> d 40 ab

L3 ANSWER 40 OF 42 CAPLUS COPYRIGHT 2004 ACS on STN

AB Ethrel [16672-87-0] sprays applied to **banana** (*Musa acuminata*) plants 3 times at weekly intervals, starting 3 months after transplanting, sharply decreased stem height and circumference and decreased **fruit** yield, whereas alar [1596-84-5] and abscisic acid [21293-29-8] slightly inhibited plant growth but increased **fruit** yield. Ethrel increased the number of days between transplanting and flowering, and between flowering and harvest; abscisic acid had the reverse effect. Gibberellic acid K salt (I) [125-67-7] greatly increased stem height and circumference, the number of days to harvest, and yield, length, weight, and volume of **fruit**. I applied directly to **fruit** also increased **fruit** weight, length, and volume, and did not affect ripening time. Abscisic acid and alar also increased **fruit** length, and abscisic acid increased **fruit** weight

=> d 41-42 ti

L3 ANSWER 41 OF 42 AGRICOLA Compiled and distributed by the National Agricultural Library of the Department of Agriculture of the United States of America. It contains copyrighted materials. All rights reserved. (2004) on STN  
TI The effect of growth inhibitors and **promoter** on the growth, flowering and **fruit** size of **banana** plants

L3 ANSWER 42 OF 42 AGRICOLA Compiled and distributed by the National Agricultural Library of the Department of Agriculture of the United States of America. It contains copyrighted materials. All rights reserved. (2004) on STN  
TI The effect of growth inhibitors and **promoter** on the growth, flowering and **fruit** size of **banana** plants

=> d 42 ab

L3 ANSWER 42 OF 42 AGRICOLA Compiled and distributed by the National Agricultural Library of the Department of Agriculture of the United States of America. It contains copyrighted materials. All rights reserved. (2004) on STN

=> d 42 so

L3 ANSWER 42 OF 42 AGRICOLA Compiled and distributed by the National Agricultural Library of the Department of Agriculture of the United States of America. It contains copyrighted materials. All rights reserved. (2004) on STN  
S0 Malays Agric Res, Apr 1975 Vol. 4, No. 1, pp. 19-29.

=> dis his

(FILE 'HOME' ENTERED AT 17:35:49 ON 13 OCT 2004)

FILE 'AGRICOLA, CAPLUS, BIOSIS' ENTERED AT 17:35:59 ON 13 OCT 2004

L1 144 S BANANA AND (PROMOTER OR TERMINATOR OR TERMINATER)  
L2 42 S L1 AND FRUIT  
L3 42 DUP REM L2 (0 DUPLICATES REMOVED)

=> d l3 and ethylene

'AND' IS NOT A VALID FORMAT

'ETHYLENE' IS NOT A VALID FORMAT

In a multifile environment, a format can only be used if it is valid in at least one of the files. Refer to file specific help messages or the STNGUIDE file for information on formats available in individual files.

REENTER DISPLAY FORMAT FOR ALL FILES (FILEDEFAULT):ti

L3 ANSWER 1 OF 42 CAPLUS COPYRIGHT 2004 ACS on STN  
TI MaExp1, an ethylene-induced expansin from ripening **banana fruit**

=> s l3 and ethylene

L4 7 L3 AND ETHYLENE

=> dup rem l7

L7 IS NOT VALID HERE

The L-number entered has not been defined in this session, or it has been deleted. To see the L-numbers currently defined in this session, enter DISPLAY HISTORY at an arrow prompt (=>).

=> d 1-7 ti

L4 ANSWER 1 OF 7 CAPLUS COPYRIGHT 2004 ACS on STN  
TI MaExpl, an **ethylene**-induced expansin from ripening  
**banana fruit**

L4 ANSWER 2 OF 7 CAPLUS COPYRIGHT 2004 ACS on STN  
TI DNA regulatory elements associated with **fruit** development

L4 ANSWER 3 OF 7 CAPLUS COPYRIGHT 2004 ACS on STN  
TI Sequences of **banana** and melon promoters for expression of  
transgenes in plants

L4 ANSWER 4 OF 7 CAPLUS COPYRIGHT 2004 ACS on STN  
TI cDNAs of **banana fruit** development and the gene  
products and developmentally-regulated **promoter** regions

L4 ANSWER 5 OF 7 CAPLUS COPYRIGHT 2004 ACS on STN  
TI cDNA sequence of **banana** 1-aminocyclopropanecarboxylate synthase  
and aminocyclopropanecarboxylate oxidase, and vectors containing cDNAs  
used for genetic transformation of plants

L4 ANSWER 6 OF 7 CAPLUS COPYRIGHT 2004 ACS on STN  
TI Control of **fruit** ripening and senescence in plants by expression  
of aminocyclopropanecarboxylic acid-metabolizing enzyme gene

L4 ANSWER 7 OF 7 CAPLUS COPYRIGHT 2004 ACS on STN  
TI DNA constructs containing pTOM75 DNA and transgenic plants containing  
these constructs

=> d so

L4 ANSWER 1 OF 7 CAPLUS COPYRIGHT 2004 ACS on STN  
SO Plant Science (Amsterdam, Netherlands) (2004), 167(6), 1351-1358  
CODEN: PLSCE4; ISSN: 0168-9452

=> d 2 so

L4 ANSWER 2 OF 7 CAPLUS COPYRIGHT 2004 ACS on STN  
SO U.S. Pat. Appl. Publ., 193 pp., Cont.-in-part of U.S. Ser. No. 160,351.  
CODEN: USXXCO

=> d 2pi

'2PI' IS NOT A VALID FORMAT FOR FILE 'CAPLUS'

The following are valid formats:

ABS ----- GI and AB  
ALL ----- BIB, AB, IND, RE  
APPS ----- AI, PRAI  
BIB ----- AN, plus Bibliographic Data and PI table (default)  
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CBIB ----- AN, plus Compressed Bibliographic Data  
DALL ----- ALL, delimited (end of each field identified)  
DMAX ----- MAX, delimited for post-processing  
FAM ----- AN, PI and PRAI in table, plus Patent Family data  
FBIB ----- AN, BIB, plus Patent FAM  
IND ----- Indexing data  
IPC ----- International Patent Classifications  
MAX ----- ALL, plus Patent FAM, RE  
PATS ----- PI, SO

SAM ----- CC, SX, TI, ST, IT  
SCAN ----- CC, SX, TI, ST, IT (random display, no answer numbers;  
SCAN must be entered on the same line as the DISPLAY,  
e.g., D SCAN or DISPLAY SCAN)  
STD ----- BIB, IPC, and NCL

IABS ----- ABS, indented with text labels  
IALL ----- ALL, indented with text labels  
IBIB ----- BIB, indented with text labels  
IMAX ----- MAX, indented with text labels  
ISTD ----- STD, indented with text labels

OBIB ----- AN, plus Bibliographic Data (original)  
OIBIB ----- OBIB, indented with text labels

SBIB ----- BIB, no citations  
SIBIB ----- IBIB, no citations

HIT ----- Fields containing hit terms  
HITIND ----- IC, ICA, ICI, NCL, CC and index field (ST and IT)  
containing hit terms  
HITRN ----- HIT RN and its text modification  
HITSTR ----- HIT RN, its text modification, its CA index name, and  
its structure diagram  
HITSEQ ----- HIT RN, its text modification, its CA index name, its  
structure diagram, plus NTE and SEQ fields  
FHITSTR ----- First HIT RN, its text modification, its CA index name, and  
its structure diagram  
FHITSEQ ----- First HIT RN, its text modification, its CA index name, its  
structure diagram, plus NTE and SEQ fields  
KWIC ----- Hit term plus 20 words on either side  
OCC ----- Number of occurrence of hit term and field in which it occurs

To display a particular field or fields, enter the display field codes. For a list of the display field codes, enter HELP DFIELDS at an arrow prompt (=>). Examples of formats include: TI; TI,AU; BIB,ST; TI,IND; TI,SO. You may specify the format fields in any order and the information will be displayed in the same order as the format specification.

All of the formats (except for SAM, SCAN, HIT, HITIND, HITRN, HITSTR, FHITSTR, HITSEQ, FHITSEQ, KWIC, and OCC) may be used with DISPLAY ACC to view a specified Accession Number.  
ENTER DISPLAY FORMAT (BIB):pi

L4 ANSWER 1 OF 7 CAPLUS COPYRIGHT 2004 ACS on STN

=> d 2 pi

L4 ANSWER 2 OF 7 CAPLUS COPYRIGHT 2004 ACS on STN					
	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 2003226175	A1	20031204	US 2001-892635	20010628
	US 6284946	B1	20010904	US 1998-160351	19980925

=> d 3 so

L4 ANSWER 3 OF 7 CAPLUS COPYRIGHT 2004 ACS on STN  
SO U.S. Pat. Appl. Publ., 50 pp., Division of U.S. Ser. No. 527,972.  
CODEN: USXXCO

=> d 3 pi

L4	ANSWER 3 OF 7	CAPLUS	COPYRIGHT 2004	ACS on STN		
	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE	
PI	US 2003182690	A1	20030925	US 2003-431304	20030506	
	US 6642438	B1	20031104	US 2000-527972	20000317	

=> d 4 pi

L4	ANSWER 4 OF 7	CAPLUS	COPYRIGHT 2004	ACS on STN		
	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE	
PI	WO 9915668	A2	19990401	WO 1998-US3343	19980923	
	WO 9915668	A3	19991007			
	W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM					
	RW: GH, GM, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG					
	CA 2304109	AA	19990401	CA 1998-2304109	19980923	
	AU 9894712	A1	19990412	AU 1998-94712	19980923	
	EP 1017820	A2	20000712	EP 1998-948058	19980923	
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI					
	JP 2001517446	T2	20011009	JP 2000-512960	19980923	

=> s p31

L5 1700 P31

=> s 15 and 13

L6 1 L5 AND L3

=> d ti

L6 ANSWER 1 OF 1 CAPLUS COPYRIGHT 2004 ACS on STN  
TI DNA regulatory elements associated with **fruit** development

=> d pi

L6	ANSWER 1 OF 1	CAPLUS	COPYRIGHT 2004	ACS on STN		
	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE	
PI	US 2003226175	A1	20031204	US 2001-892635	20010628	
	US 6284946	B1	20010904	US 1998-160351	19980925	

=> s ((may, g?) or (may g?))/au

L7 916 ((MAY, G?) OR (MAY G?))/AU

=> s 17 and banana

L8 40 L7 AND BANANA

=> dup rem l8

PROCESSING COMPLETED FOR L8

L9 22 DUP REM L8 (18 DUPLICATES REMOVED)

=> d 1-10 ti

L9 ANSWER 1 OF 22 CAPLUS COPYRIGHT 2004 ACS on STN  
 TI DNA regulatory elements associated with fruit development

L9 ANSWER 2 OF 22 CAPLUS COPYRIGHT 2004 ACS on STN  
 TI Targeted in vivo mutagenesis of plant genes without the use of chimeric oligonucleotides

L9 ANSWER 3 OF 22 CAPLUS COPYRIGHT 2004 ACS on STN  
 TI Cell-free assay for plant gene targeting and conversion

L9 ANSWER 4 OF 22 BIOSIS COPYRIGHT (c) 2004 The Thomson Corporation. on STN  
 TI **Banana** DNA associated with fruit development.

L9 ANSWER 5 OF 22 AGRICOLA Compiled and distributed by the National Agricultural Library of the Department of Agriculture of the United States of America. It contains copyrighted materials. All rights reserved. (2004) on STN DUPLICATE 1  
 TI Agrobacterium-mediated transformation of embryogenic cell suspensions of the **banana** cultivar Rasthali (AAB).

L9 ANSWER 6 OF 22 AGRICOLA Compiled and distributed by the National Agricultural Library of the Department of Agriculture of the United States of America. It contains copyrighted materials. All rights reserved. (2004) on STN DUPLICATE 2  
 TI Development of a transformational system for Mycosphaerella pathogens of **banana**: a tool for the study of host/pathogen interactions.

L9 ANSWER 7 OF 22 AGRICOLA Compiled and distributed by the National Agricultural Library of the Department of Agriculture of the United States of America. It contains copyrighted materials. All rights reserved. (2004) on STN DUPLICATE 3  
 TI Purification, characterization and structural analysis of an abundant beta-1,3-glucanase from **banana** fruit.

L9 ANSWER 8 OF 22 CAPLUS COPYRIGHT 2004 ACS on STN DUPLICATE 4  
 TI Identification and chromosomal localization of the monkey retrotransposon in Musa sp.

L9 ANSWER 9 OF 22 AGRICOLA Compiled and distributed by the National Agricultural Library of the Department of Agriculture of the United States of America. It contains copyrighted materials. All rights reserved. (2004) on STN DUPLICATE 5  
 TI Purification and structural analysis of an abundant thaumatin-like protein from ripe **banana** fruit.

L9 ANSWER 10 OF 22 AGRICOLA Compiled and distributed by the National Agricultural Library of the Department of Agriculture of the United States of America. It contains copyrighted materials. All rights reserved. (2004) on STN DUPLICATE 6  
 TI Fruit-specific lectins from **banana** and plantain.

=> d 4 ab

L9 ANSWER 4 OF 22 BIOSIS COPYRIGHT (c) 2004 The Thomson Corporation. on STN  
 AB The present invention provides isolated and purified genes which are differentially expressed during **banana** fruit development, and the protein products of these genes. The present invention further provides DNA regulatory elements which are differentially expressed during **banana** fruit development, chimeric genes comprising these DNA regulatory elements operably linked to heterologous DNA molecules, and

plants transformed with said chimeric genes, providing for controlled expression of said heterologous DNA molecules during the development and ripening of the fruit of said plants, or in response to exogenous ethylene signals in said plants. The present invention also provides a method for expression of a heterologous protein in fruit comprising transforming fruiting plants with one or more chimeric genes according to the present invention, exposing said fruit to an endogenous or exogenous ethylene signal, and harvesting fruit containing said heterologous protein. The method of the present invention may further comprise isolating the proteins produced by said method from the harvested fruit. In a particularly preferred embodiment, the heterologous protein is a therapeutic protein, which may be isolated from the harvested fruit, or consumed directly in the transformed fruit by a patient in need of said therapeutic protein.

=> d 4 pi

L9 ANSWER 4 OF 22 BIOSIS COPYRIGHT (c) 2004 The Thomson Corporation. on  
STN  
PI US 6284946 September 04, 2001

=> d 5 ab

L9 ANSWER 5 OF 22 AGRICOLA Compiled and distributed by the National  
Agricultural Library of the Department of Agriculture of the United States  
of America. It contains copyrighted materials. All rights reserved.  
(2004) on STN DUPLICATE 1  
AB A protocol was developed for establishing embryogenic suspension cultures  
from in vitro-grown, thin shoot-tip sections of the **banana**  
cultivar Rasthali. The best medium for callus induction was an MS-based  
medium supplemented with 2 mg/l 2,4-D and 0.2 mg/l zeatin. The callus was  
transferred to liquid medium to establish embryogenic cell suspensions.  
These cultures were subsequently used for Agrobacterium-mediated  
transformation. The Agrobacterium tumefaciens strain EHA105 containing the  
binary vector pVGSUN with the als gene as a selectable marker and an  
intron-containing the gusA gene as a reporter gene was used for  
transformations. The herbicide Glean was used as a selection agent. Two  
hundred putative transformants were recovered, of which a set of 16 was  
tested by histochemical analysis for GUS expression and by Southern blot  
analysis with a probe for the gusA gene. The plants were positive for GUS  
expression and integration of the gusA gene. Two of the transformants were  
grown to maturity under greenhouse conditions. Bananas were harvested to  
test GUS expression by histochemical analysis. The fruit from both  
transgenics tested positive for GUS expression.

=> d 5 pi

'PI' IS NOT A VALID FORMAT

In a multifile environment, a format can only be used if it is valid  
in at least one of the files. Refer to file specific help messages  
or the STNGUIDE file for information on formats available in  
individual files.

REENTER DISPLAY FORMAT FOR ALL FILES (FILEDEFAULT):so

L9 ANSWER 5 OF 22 AGRICOLA Compiled and distributed by the National  
Agricultural Library of the Department of Agriculture of the United States  
of America. It contains copyrighted materials. All rights reserved.  
(2004) on STN DUPLICATE 1  
SO Plant cell reports, Feb 2001. Vol. 20, No. 2. p. 157-162  
Publisher: Berlin : Springer-Verlag.  
CODEN: PCRPD8; ISSN: 0721-7714

=> s (clendennen s?) or (clendennen, s?))/au

UNMATCHED RIGHT PARENTHESIS 'S?))/AU'

The number of right parentheses in a query must be equal to the number of left parentheses.

=> s ((clendennen s?) or (clendennen, s?))/au

L10 45 ((CLENDENNEN S?) OR (CLENDENNEN, S?))/AU

=> s l10 and banana

L11 17 L10 AND BANANA

=> dup rem l11

PROCESSING COMPLETED FOR L11

L12 12 DUP REM L11 (5 DUPLICATES REMOVED)

=> d 1-12 ti

L12 ANSWER 1 OF 12 CAPLUS COPYRIGHT 2004 ACS on STN

TI DNA regulatory elements associated with fruit development

L12 ANSWER 2 OF 12 CAPLUS COPYRIGHT 2004 ACS on STN

TI Sequences of **banana** and melon promoters for expression of transgenes in plants

L12 ANSWER 3 OF 12 BIOSIS COPYRIGHT (c) 2004 The Thomson Corporation. on STN

TI **Banana** DNA associated with fruit development.

L12 ANSWER 4 OF 12 CAPLUS COPYRIGHT 2004 ACS on STN

TI **Banana** and melon promoters for expression of transgenes in plants

L12 ANSWER 5 OF 12 CAPLUS COPYRIGHT 2004 ACS on STN DUPLICATE 1

TI Identification and chromosomal localization of the monkey retrotransposon in *Musa* sp.

L12 ANSWER 6 OF 12 CAPLUS COPYRIGHT 2004 ACS on STN

TI cDNAs of **banana** fruit development and the gene products and developmentally-regulated promoter regions

L12 ANSWER 7 OF 12 AGRICOLA Compiled and distributed by the National Agricultural Library of the Department of Agriculture of the United States of America. It contains copyrighted materials. All rights reserved. (2004) on STN DUPLICATE 2

TI The abundant 31-kilodalton **banana** pulp protein is homologous to class-III acidic chitinases.

L12 ANSWER 8 OF 12 CAPLUS COPYRIGHT 2004 ACS on STN

TI The abundant 31-kilodalton **banana** pulp protein is homologous to class-III acidic chitinases

L12 ANSWER 9 OF 12 AGRICOLA Compiled and distributed by the National Agricultural Library of the Department of Agriculture of the United States of America. It contains copyrighted materials. All rights reserved. (2004) on STN DUPLICATE 3

TI Differential gene expression in ripening **banana** fruit.

L12 ANSWER 10 OF 12 AGRICOLA Compiled and distributed by the National Agricultural Library of the Department of Agriculture of the United States of America. It contains copyrighted materials. All rights reserved. (2004) on STN DUPLICATE 4

TI The role of ethylene in **banana** fruit ripening.

L12 ANSWER 11 OF 12 BIOSIS COPYRIGHT (c) 2004 The Thomson Corporation. on



STN

TI The influence of metal ions and hydrogen peroxide on the expression of a novel fruit-associated class of metallothioneins from **banana** (*Musa acuminata* cv Grand nain).

L12 ANSWER 12 OF 12 BIOSIS COPYRIGHT (c) 2004 The Thomson Corporation. on STN

TI Isolation and identification of genes differentially expressed during **banana** fruit ripening.

=> d 4 ab

L12 ANSWER 4 OF 12 CAPLUS COPYRIGHT 2004 ACS on STN

AB The present invention is directed to **banana** fruit-associated promoters, a melon actin promoter and **banana** fusion promoters capable of providing expression of heterologous genes in addition to heterologous nucleic acid constructs, vectors, transformation methods, transgenic plant cells and transgenic plants comprising such promoters. The invention is also directed to methods for screening plant promoters in various types of plant tissue using a transient expression assay.

=> d 4 pi

L12 ANSWER 4 OF 12 CAPLUS COPYRIGHT 2004 ACS on STN

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2000056863	A1	20000928	WO 2000-US7293	20000317
W: AU, CA, JP				
RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
EP 1165755	A1	20020102	EP 2000-918138	20000317
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI				
JP 2002539779	T2	20021126	JP 2000-606722	20000317

=> d 7 ab

L12 ANSWER 7 OF 12 AGRICOLA Compiled and distributed by the National Agricultural Library of the Department of Agriculture of the United States of America. It contains copyrighted materials. All rights reserved. (2004) on STN

DUPLICATE 2

AB We have identified and characterized the abundant protein from the pulp of **banana** fruit (*Musa acuminata* cv. Grand Nain), and have isolated a cDNA clone encoding this protein. Comparison of the amino terminal sequence of the purified 31 kDa protein (P31) suggests that it is related to plant chitinases. Western analyses utilizing rabbit anti-P31 antiserum demonstrate that this protein is pulp-specific in **banana**. A full-length cDNA clone homologous to class III acidic chitinase genes has been isolated from a pulp cDNA library by differential screening. The identity of this clone as encoding P31 was verified by comparisons between the amino-terminal peptide sequence and the cDNA sequence and cross-hybridization of the translation product of the cDNA clone with P31 antiserum. Northern and western blot analyses of RNA and protein isolated from **banana** pulp at different stages of ripening indicate that the cDNA and protein are expressed at high levels in the pulp of unripe fruit, and that their abundance decreases as the fruit ripens. Based on its expression pattern and deduced amino acid sequence and composition, we hypothesize that the physiological role of P31 is not for plant protection, but as a storage protein in **banana** pulp.

=> d 8 ab

L12 ANSWER 8 OF 12 CAPLUS COPYRIGHT 2004 ACS on STN

AB The abundant protein from the pulp of **banana** fruit (*Musa acuminata* cv. Grand Nain) was identified and characterized, and a cDNA clone encoding this protein was isolated. Comparison of the N-terminal sequence of the purified 31-kDa protein (P31) suggests that it is related to plant chitinases. Western analyses utilizing rabbit anti-P31 antiserum demonstrate that this protein is pulp-specific in **banana**. A full-length cDNA clone homologous to class III acidic chitinase genes was isolated from a pulp cDNA library by differential screening. The identity of this clone as encoding P31 was verified by comparisons between the N-terminal peptide sequence and the cDNA sequence and cross-hybridization of the translation product of the cDNA clone with P31 antiserum. Northern and western blot analyses of RNA and protein isolated from **banana** pulp at different stages of ripening indicate that the cDNA and protein are expressed at high levels in the pulp of unripe fruit, and that their abundance decreases as the fruit ripens. Based on its expression pattern and deduced amino acid sequence and composition, the physiol. role of P31 may not be for plant protection, but as a storage protein in **banana** pulp.

=> d 9 ab

L12 ANSWER 9 OF 12 AGRICOLA Compiled and distributed by the National Agricultural Library of the Department of Agriculture of the United States of America. It contains copyrighted materials. All rights reserved. (2004) on STN

DUPLICATE 3

AB During **banana** (*Musa acuminata* L.) fruit ripening ethylene production triggers a developmental cascade that is accompanied by a massive conversion of starch to sugars, an associated burst of respiratory activity, and an increase in protein synthesis. Differential screening of cDNA libraries representing **banana** pulp at ripening stages 1 and 3 has led to the isolation of 11 nonredundant groups of differentially expressed mRNAs. Identification of these transcripts by partial sequence analysis indicates that two of the mRNAs encode proteins involved in carbohydrate metabolism, whereas others encode proteins thought to be associated with pathogenesis, senescence, or stress responses in plants. Their relative abundance in the pulp and tissue-specific distribution in greenhouse-grown **banana** plants were determined by northern-blot analyses. The relative abundance of transcripts encoding starch synthase, granule-bound starch synthase, chitinase, lectin, and a type-2 metallothionein decreased in pulp during ripening. Transcripts encoding endochitinase, beta-1,3-glucanase, a thaumatin-like protein, ascorbate peroxidase, metallothionein, and a putative senescence-related protein increased early in ripening. The elucidation of the molecular events associated with **banana** ripening will facilitate a better understanding and control of these processes, and will allow us to attain our long-term goal of producing candidate oral vaccines in transgenic **banana** plants.

=> d 12 aGB

'AGB' IS NOT A VALID FORMAT

In a multifile environment, a format can only be used if it is valid in at least one of the files. Refer to file specific help messages or the STNGUIDE file for information on formats available in individual files.

REENTER DISPLAY FORMAT FOR ALL FILES (FILEDEFAULT):AB

L12 ANSWER 12 OF 12 BIOSIS COPYRIGHT (c) 2004 The Thomson Corporation. on STN

```
=> ab
AB IS NOT A RECOGNIZED COMMAND
The previous command name entered was not recognized by the system.
For a list of commands available to you in the current file, enter
"HELP COMMANDS" at an arrow prompt (=>).

=> d 12 ab

L12  ANSWER 12 OF 12  BIOSIS  COPYRIGHT (c) 2004 The Thomson Corporation.  on
      STN

=> d 12 so

L12  ANSWER 12 OF 12  BIOSIS  COPYRIGHT (c) 2004 The Thomson Corporation.  on
      STN
SO   Plant Physiology (Rockville), (1996) Vol. 111, No. 2 SUPPL., pp. 34.
      Meeting Info.: Annual Meeting of the American Society of Plant
      Physiologists. San Antonio, Texas, USA. July 27-31, 1996.
      CODEN: PLPHAY. ISSN: 0032-0889.

=> s ((mason h?) or (mason, h?))/au
L13      1279 ((MASON H?) OR (MASON, H?))/AU

=> s l13 and banana
L14      10 L13 AND BANANA

=> dup rem l14
PROCESSING COMPLETED FOR L14
L15      8 DUP REM L14 (2 DUPLICATES REMOVED)

=> d 1-8 ti

L15  ANSWER 1 OF 8  CAPLUS  COPYRIGHT 2004 ACS on STN
TI   DNA regulatory elements associated with fruit development

L15  ANSWER 2 OF 8  BIOSIS  COPYRIGHT (c) 2004 The Thomson Corporation.  on STN
TI   Edible plant vaccines: Applications for prophylactic and therapeutic
      molecular medicine.

L15  ANSWER 3 OF 8  BIOSIS  COPYRIGHT (c) 2004 The Thomson Corporation.  on STN
TI   Plant-based vaccines: Expression and oral immunogenicity.

L15  ANSWER 4 OF 8  CAPLUS  COPYRIGHT 2004 ACS on STN
TI   Expression of immunogenic hepatitis B surface antigens in transgenic
      plants

L15  ANSWER 5 OF 8  CAPLUS  COPYRIGHT 2004 ACS on STN
TI   Orally immunogenic bacterial enterotoxins expressed in transgenic plants

L15  ANSWER 6 OF 8  BIOSIS  COPYRIGHT (c) 2004 The Thomson Corporation.  on STN
TI   Transgenic banana containing the hepatitis B surface antigen.

L15  ANSWER 7 OF 8  AGRICOLA  Compiled and distributed by the National
      Agricultural Library of the Department of Agriculture of the United States
      of America. It contains copyrighted materials. All rights reserved.
      (2004) on STN                                     DUPLICATE 1
TI   Generation of transgenic banana (Musa acuminata) plants via
      Agrobacterium-mediated transformation.

L15  ANSWER 8 OF 8  BIOSIS  COPYRIGHT (c) 2004 The Thomson Corporation.  on STN
TI   Expression of genes encoding candidate vaccines in transgenic plants.
```

=> d pi

	L15 ANSWER 1 OF 8 CAPLUS COPYRIGHT 2004 ACS on STN				
	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
	-----	----	-----	-----	-----
PI	US 2003226175	A1	20031204	US 2001-892635	20010628
	US 6284946	B1	20010904	US 1998-160351	19980925

=> d 2 ab

L15 ANSWER 2 OF 8 BIOSIS COPYRIGHT (c) 2004 The Thomson Corporation. on STN  
AB The use of edible plants for the production and delivery of vaccine proteins could provide an economical alternative to fermentation systems. Genes encoding bacterial and viral antigens are faithfully expressed in edible tissues to form immunogenic proteins. Studies in animals and humans have shown that ingestion of transgenic plants containing vaccine proteins causes production of antigen-specific antibodies in serum and mucosal secretions. In general, the technology is limited by low expression levels for nuclear-integrated transgenes, but recent progress in plant organelle transformation shows promise for enhanced expression. The stability and immunogenicity of orally delivered antigens vary greatly, which necessitates further study on protein engineering to enhance mucosal delivery. These issues are discussed with regard to the further development of plant-based vaccine technology.

=> d 2 pi

L15 ANSWER 2 OF 8 BIOSIS COPYRIGHT (c) 2004 The Thomson Corporation. on STN

=> d 2 so

L15 ANSWER 2 OF 8 BIOSIS COPYRIGHT (c) 2004 The Thomson Corporation. on STN  
SO Trends in Molecular Medicine, (July, 2002) Vol. 8, No. 7, pp. 324-329.  
print.  
ISSN: 1471-4914.

=> d 3 ab

L15 ANSWER 3 OF 8 BIOSIS COPYRIGHT (c) 2004 The Thomson Corporation. on STN  
AB The use of plants for production and delivery of vaccine proteins has shown promise in research conducted during the past decade. Genes encoding bacterial and viral antigens are faithfully expressed, processed, and assembled in plant cells to form immunogenic proteins. Studies in animals and humans showed that ingestion of transgenic potato containing vaccine proteins caused production of antigen-specific antibodies in serum and mucosal secretions. Future studies must aim to improve antigen expression and to develop processes to formulate plant material for antigen stability and convenient oral delivery. Furthermore, production methods should ensure the containment of pharmaceutical crops and prevent contamination of the food supply.

=> d 3 so

L15 ANSWER 3 OF 8 BIOSIS COPYRIGHT (c) 2004 The Thomson Corporation. on STN  
SO In Vitro Cellular and Developmental Biology Plant, (May-June, 2002) Vol. 38, No. 3, pp. 237-240. print.  
CODEN: IVCPEO. ISSN: 1054-5476.

=> d 4 so

L15 ANSWER 4 OF 8 CAPLUS COPYRIGHT 2004 ACS on STN  
SO PCT Int. Appl., 144 pp.  
CODEN: PIXXD2

=> d 4 pi

L15 ANSWER 4 OF 8 CAPLUS COPYRIGHT 2004 ACS on STN

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI WO 2000037610	A2	20000629	WO 1999-US31020	19991223
WO 2000037610	A3	20020613		
W:	AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, GM, HR, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM			
RW:	GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG			
CA 2357004	AA	20000629	CA 1999-2357004	19991223
AU 2000025949	A1	20000712	AU 2000-25949	19991223
EP 1230257	A2	20020814	EP 1999-968556	19991223
R:	AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI, CY			
BR 9916522	A	20021224	BR 1999-16522	19991223
JP 2003512812	T2	20030408	JP 2000-589666	19991223
US 6551820	B1	20030422	US 1999-471573	19991223
US 2004086530	A1	20040506	US 2003-335774	20030102

=> d 5 so

L15 ANSWER 5 OF 8 CAPLUS COPYRIGHT 2004 ACS on STN  
SO PCT Int. Appl., 103 pp.  
CODEN: PIXXD2

=> d 5 pi

L15 ANSWER 5 OF 8 CAPLUS COPYRIGHT 2004 ACS on STN

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI WO 2000037609	A2	20000629	WO 1999-US30747	19991222
WO 2000037609	A3	20000914		
W:	AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, GM, HR, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM			
RW:	GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG			
CA 2359586	AA	20000629	CA 1999-2359586	19991222
AU 2000023818	A1	20000712	AU 2000-23818	19991222
AU 773953	B2	20040610		
BR 9916515	A	20011106	BR 1999-16515	19991222
EP 1175144	A2	20020130	EP 1999-967556	19991222
R:	AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO			

JP 2002533068	T2	20021008	JP 2000-589665	19991222
US 2003176653	A1	20030918	US 2002-334729	20021230

=> d 6 so

L15 ANSWER 6 OF 8 BIOSIS COPYRIGHT (c) 2004 The Thomson Corporation. on STN  
SO In Vitro Cellular and Developmental Biology Animal, (March, 2000) Vol. 36,  
No. 3 Part 2, pp. 61.A. print.  
Meeting Info.: Meeting of the Society for In Vitro Biology World Congress  
on In Vitro Biology. San Diego, California, USA. June 10-15, 2000.  
ISSN: 1071-2690.

=> d 7 so

L15 ANSWER 7 OF 8 AGRICOLA Compiled and distributed by the National  
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(2004) on STN DUPLICATE 1  
SO Bio/technology, May 1995. Vol. 13, No. 5. p. 486-492  
Publisher: [New York, N.Y. : Nature Publishing,  
CODEN: BTCHDA; ISSN: 0733-222X

=> d 7 ab

L15 ANSWER 7 OF 8 AGRICOLA Compiled and distributed by the National  
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of America. It contains copyrighted materials. All rights reserved.  
(2004) on STN DUPLICATE 1

=> d 8 so

L15 ANSWER 8 OF 8 BIOSIS COPYRIGHT (c) 2004 The Thomson Corporation. on STN  
SO AIDS Research and Human Retroviruses, (1994) Vol. 10, No. SUPPL. 2, pp.  
S67.  
Meeting Info.: Sixth Annual Meeting of the National Cooperative Vaccine  
Development Groups for AIDS on Advances in AIDS Vaccine Development.  
Alexandria, Virginia, USA. October 30-November 4, 1993.  
CODEN: ARHRE7. ISSN: 0889-2229.

=> s ((gomez lim, m?) or (gomez lim, m?))/au

L16 53 ((GOMEZ LIM, M?) OR (GOMEZ LIM, M?))/AU

=> s ((gomez lim, m?) or (gomez lim m?))/au

L17 53 ((GOMEZ LIM, M?) OR (GOMEZ LIM M?))/AU

=> s l17 and banana

L18 7 L17 AND BANANA

=> dup rem l18

PROCESSING COMPLETED FOR L18

L19 5 DUP REM L18 (2 DUPLICATES REMOVED)

=> d 1-5 ti

L19 ANSWER 1 OF 5 CAPLUS COPYRIGHT 2004 ACS on STN  
TI DNA regulatory elements associated with fruit development

L19 ANSWER 2 OF 5 BIOSIS COPYRIGHT (c) 2004 The Thomson Corporation. on STN  
TI Genetic transformation of some tropical species.

L19 ANSWER 3 OF 5 AGRICOLA Compiled and distributed by the National Agricultural Library of the Department of Agriculture of the United States of America. It contains copyrighted materials. All rights reserved. (2004) on STN DUPLICATE 1

TI The abundant 31-kilodalton **banana** pulp protein is homologous to class-III acidic chitinases.

L19 ANSWER 4 OF 5 CAPLUS COPYRIGHT 2004 ACS on STN

TI The abundant 31-kilodalton **banana** pulp protein is homologous to class-III acidic chitinases

L19 ANSWER 5 OF 5 CAPLUS COPYRIGHT 2004 ACS on STN DUPLICATE 2

TI Ethylene biosynthesis in **banana** fruit: isolation of a genomic clone to ACC oxidase and expression studies

=> d 5 ab

L19 ANSWER 5 OF 5 CAPLUS COPYRIGHT 2004 ACS on STN DUPLICATE 2

AB In this paper we present the expression studies and structural anal. of one genomic sequence isolated from **banana**. Using a RNA-based PCR amplification of ACC oxidase cDNAs from ripe **banana**, we obtained a product of 800 bp which after sequence anal. was found to code for a protein highly homologous to ACC oxidase proteins. This PCR product was used as probe for screening a genomic library and three different groups of clones were obtained as indicated by restriction mapping. One clone (ACO1) was selected for further study and fully sequenced. Comparison of this sequence with the PCR products and other closed ACC oxidase genes, revealed that ACO1 encoded the transcript in four exons interrupted by three introns. Southern blot anal. showed a major band hybridizing to the PCR probe suggesting that the ACC oxidase gene is present in a single copy or that the genes are clustered as is the case in tomato and carnation. By northern blot anal. it was found that the ACC oxidase transcript appears in the pulp earlier than in the peel but that exogenous ethylene alters this pattern and the transcript is expressed in the peel first.

=> d 5 so

L19 ANSWER 5 OF 5 CAPLUS COPYRIGHT 2004 ACS on STN DUPLICATE 2

SO Plant Science (Shannon, Ireland) (1997), 123(1,2), 123-131  
CODEN: PLSCE4; ISSN: 0168-9452

=> s ((arntzen c?) or (arntzen, c?))/au

L20 623 ((ARNTZEN C?) OR (ARNTZEN, C?))/AU

=> s l20 and banana

L21 16 L20 AND BANANA

=> dup rem l21

PROCESSING COMPLETED FOR L21

L22 11 DUP REM L21 (5 DUPLICATES REMOVED)

=> d 1-11 ti

L22 ANSWER 1 OF 11 CAPLUS COPYRIGHT 2004 ACS on STN

TI DNA regulatory elements associated with fruit development

L22 ANSWER 2 OF 11 BIOSIS COPYRIGHT (c) 2004 The Thomson Corporation. on STN

TI Edible plant vaccines: Applications for prophylactic and therapeutic

molecular medicine.

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- TI Agrobacterium-mediated transformation of embryogenic cell suspensions of the **banana** cultivar Rasthali (AAB).
- L22 ANSWER 4 OF 11 CAPLUS COPYRIGHT 2004 ACS on STN
- TI Expression of immunogenic hepatitis B surface antigens in transgenic plants
- L22 ANSWER 5 OF 11 CAPLUS COPYRIGHT 2004 ACS on STN
- TI Orally immunogenic bacterial enterotoxins expressed in transgenic plants
- L22 ANSWER 6 OF 11 BIOSIS COPYRIGHT (c) 2004 The Thomson Corporation. on STN
- TI Transgenic **banana** containing the hepatitis B surface antigen.
- L22 ANSWER 7 OF 11 AGRICOLA Compiled and distributed by the National Agricultural Library of the Department of Agriculture of the United States of America. It contains copyrighted materials. All rights reserved. (2004) on STN DUPLICATE 2
- TI The abundant 31-kilodalton **banana** pulp protein is homologous to class-III acidic chitinases.
- L22 ANSWER 8 OF 11 CAPLUS COPYRIGHT 2004 ACS on STN
- TI The abundant 31-kilodalton **banana** pulp protein is homologous to class-III acidic chitinases
- L22 ANSWER 9 OF 11 BIOSIS COPYRIGHT (c) 2004 The Thomson Corporation. on STN
- TI Isolation and identification of genes differentially expressed during **banana** fruit ripening.
- L22 ANSWER 10 OF 11 AGRICOLA Compiled and distributed by the National Agricultural Library of the Department of Agriculture of the United States of America. It contains copyrighted materials. All rights reserved. (2004) on STN DUPLICATE 3
- TI Generation of transgenic **banana** (*Musa acuminata*) plants via Agrobacterium-mediated transformation.
- L22 ANSWER 11 OF 11 BIOSIS COPYRIGHT (c) 2004 The Thomson Corporation. on STN
- TI Expression of genes encoding candidate vaccines in transgenic plants.

=> d 3 ab

- L22 ANSWER 3 OF 11 AGRICOLA Compiled and distributed by the National Agricultural Library of the Department of Agriculture of the United States of America. It contains copyrighted materials. All rights reserved. (2004) on STN DUPLICATE 1
- AB A protocol was developed for establishing embryogenic suspension cultures from in vitro-grown, thin shoot-tip sections of the **banana** cultivar Rasthali. The best medium for callus induction was an MS-based medium supplemented with 2 mg/l 2,4-D and 0.2 mg/l zeatin. The callus was transferred to liquid medium to establish embryogenic cell suspensions. These cultures were subsequently used for Agrobacterium-mediated transformation. The Agrobacterium tumefaciens strain EHA105 containing the binary vector pVGSUN with the *als* gene as a selectable marker and an intron-containing the *gusA* gene as a reporter gene was used for transformations. The herbicide Glean was used as a selection agent. Two



hundred putative transformants were recovered, of which a set of 16 was tested by histochemical analysis for GUS expression and by Southern blot analysis with a probe for the gusA gene. The plants were positive for GUS expression and integration of the gusA gene. Two of the transformants were grown to maturity under greenhouse conditions. Bananas were harvested to test GUS expression by histochemical analysis. The fruit from both transgenics tested positive for GUS expression.

=> d 9 ab

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=> d 9 so

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S0 Plant Physiology (Rockville), (1996) Vol. 111, No. 2 SUPPL., pp. 34.  
Meeting Info.: Annual Meeting of the American Society of Plant  
Physiologists. San Antonio, Texas, USA. July 27-31, 1996.  
CODEN: PLPHAY. ISSN: 0032-0889.